

Work Order ID 65134

Thursday, January 06, 2011 2:29:44 PM

Page 1

Item ID: D206-667-203TRN

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Turning Detail

Start Date: 1/6/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 1/20/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date: 11-01-6

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D206-667-243	Rev C								

100

0.00



Mori Seiki

MORI SEIKI CNC LATHE LARGE

Memo

0.00

Mori Seiki CNC Lathe Large

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio
FA089□2-Turn first side as per Folio FA089□3-File down transition lines
smooth.

Smt 11/01/26

1 0

110

0.00



QC

QC1- Inspect dimensions to dimension sheet

Memo

0.00

Quality Control

Smt 11/01/26

1 0

120

0.00



Mori Seiki

MORI SEIKI CNC LATHE LARGE

Memo

0.00

Mori Seiki CNC Lathe Large

1-Turn second side as per Folio FA089□2-File down transition lines smooth.
□
3-Remove sand and plugs□4-Scrib part# and batch #

Smt 11/01/27

1 0

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC1- Inspect dimensions to dimension sheet

0.00

amb 11/01/27

QC

Memo

0.00

Quality Control

140

QC8- Inspect parts - second check

0.00

SL 11/01/27

QC

Memo

0.00

Quality Control

150

Crosstubes Chemical Conversion

0.00



HandFXtube

Memo

0.00

*BB 11/01/31**(1)*

Hand Finishing Crosstubes

W/O:		WORK ORDER CHANGES					
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Page 3

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Accept



Setup Start



Revision ID:

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Start Date: 1/6/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 1/20/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

11-1-31

170



Packaging

Packaging

Packaging

0.00

Memo

Identify and Stock in kanban rack Location: 46

0.00

11-1-31

180



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

11/02/02

pl 11-02-1
①

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Picklist Print

Thursday, January 06, 2011 2:29:50 PM

Page 1

Work Order ID: 65134



Parent Item: D206-667-203TRN



Parent Item Name: Crosstube Turning Detail

Start Date: 1/6/2011

Required Date: 1/20/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-03-06 new issue DD verified by:ec
IPP Rev B 08.04.02 Removed polish EC verified by: DD
IPP Rev C 09.01.06 ECN 08-562 EC verified by:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D6004-115

Manufactured

No

100

Each

46.0000

1

1



Crosstube Material

Location

Loc Qty

Loc Code

LG

46

34685

15

34774

2

38336

29

1 m/11/01/26

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NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	05134
Description: Crosstube Assembly		Part Number:	D206-667-243
Inspection Dwg: D206-667-243 Rev: C		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

Inspection Sheet	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.490	+0.005/-0.000	2.494	✓		Micr	ML-03
	2.018	+0.005/-0.000	2.022	✓			
	2.079	+0.005/-0.000	2.084	✓			
	2.145	+0.005/-0.000	2.149	✓			
	2.209	+0.005/-0.000	2.212	✓			
	2.287	+0.005/-0.000	2.290	✓			
	2.363	+0.005/-0.000	2.368	✓			
	2.433	+0.005/-0.000	2.438	✓			
	0.200	+/-0.010	.200	✓		Vern	ML-7
	0.500 x 30°	+/-0.010	.500 x 30°	✓		"	"
	R0.063	+/-0.010	R.063	✓		Rad-gage	REF
	R0.500	+/-0.010	R.500	✓		"	"
	4.438	+/-0.030	4.438	✓		Vern	ML-7
SIDE B	104.91	+/-0.020	104.930	✓		M-tape	ML-2
	2.490	+0.005/-0.000	2.493	✓		Micr	ML-03
	2.018	+0.005/-0.000	2.022	✓			
	2.079	+0.005/-0.000	2.083	✓			
	2.145	+0.005/-0.000	2.148	✓			
	2.209	+0.005/-0.000	2.211	✓			
	2.287	+0.005/-0.000	2.290	✓			
	2.363	+0.005/-0.000	2.368	✓			
	2.433	+0.005/-0.000	2.438	✓			
	0.200	+/-0.010	.200	✓		Vern	ML-7
	0.500 x 30°	+/-0.010	.500 x 30°	✓		"	"
	R0.063	+/-0.010	R.063	✓		Rad-gage	REF
	R0.500	+/-0.010	R.500	✓		"	"
	4.438	+/-0.030	4.438	✓		Vern	ML-03

Measured by:	QML	Audited by:	JL	Preliminary Approval:	N/A
Date:	11/01/27	Date:	11/01/27	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.09.01	New Issue (P/O D206-667-203)	KJ/JLM	
B	10.08.25	Dwg Rev updated	KJ	

W/O:		WORK ORDER CHANGES					
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Item	Qty	Part Number	Description
	-243		
1	X	D206-667-243	CROSSTUBE ASSEMBLY (206L HIGH AFT)
2	1	D6004-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2892-1	SUPPORT
6	4	D3595-063-450	RUBBER CUSHION
7	4	MS21920-22	CLAMP
8	14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6004-115
FINISHED LENGTH = 104.91±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-243" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 21.9 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-22 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2892-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 05134
2811-01-6

RELEASED
08/11/06

C	REVISE GENERAL NOTES/PART LIST (ZN 07-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-450 WAS D2856-400-773 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCES (ZN 4-3, C5-3, D3-3); RELOCATED FLAG #6 (ZN A9-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	<u>RP</u>		
DRAWN	RF		
CHECKED	<u>RP</u>		
MFG. APPR.	<u>RP</u>		
APPROVED	<u>RP</u>		
DE APPR.	<u>RP</u>		
DATE	08.11.06		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D206-667-243	REV. C SHEET 1 OF 4
TITLE CROSSTUBE ASS'Y (206L HIGH AFT)	SCALE NTS
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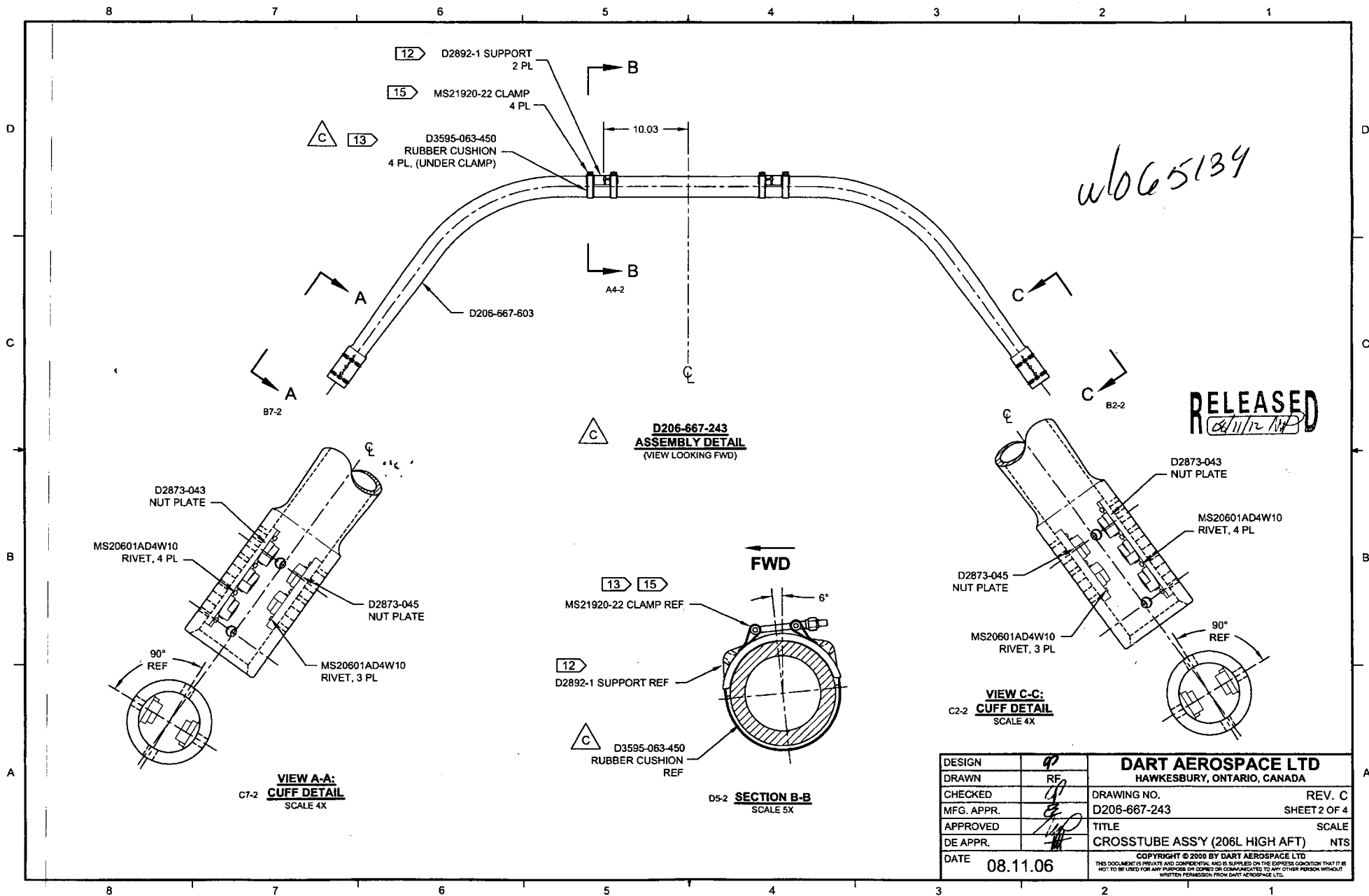
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[illegible]

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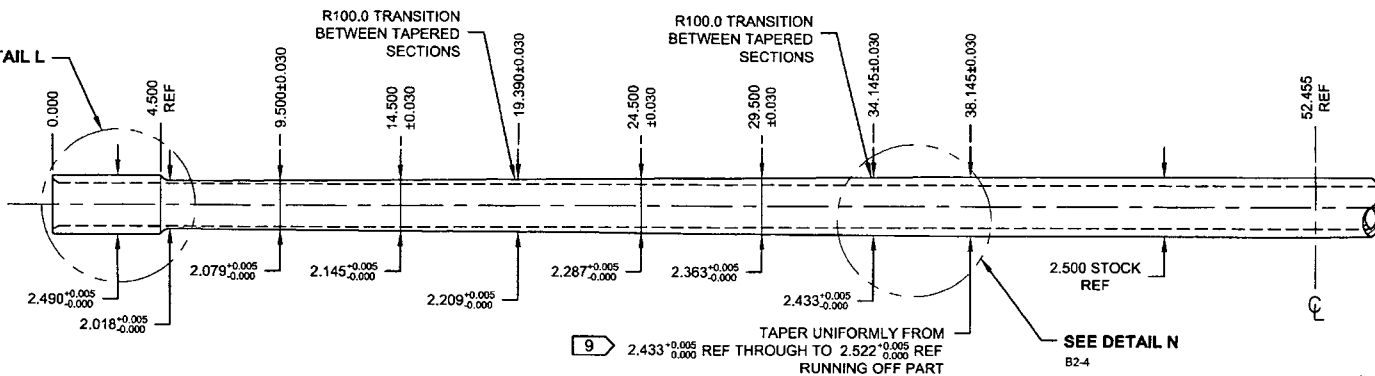
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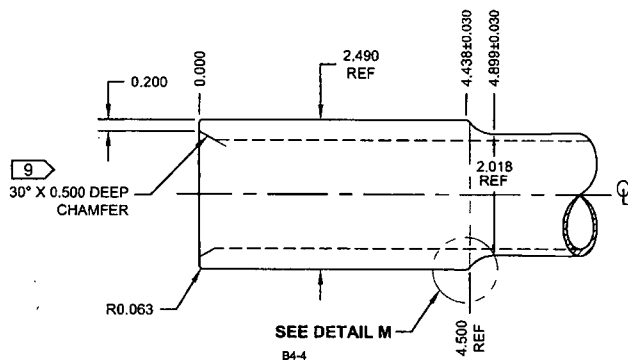
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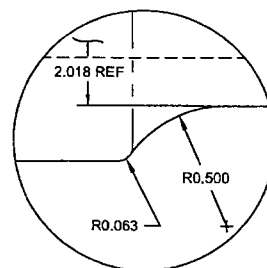
SEE DETAIL L
B7-4



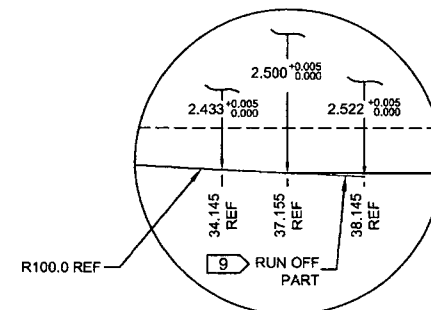
TURNING DETAIL



DETAIL L: CROSSTUBE CUFF
NOT TO SCALE








DETAIL M: CUFF TRANSITION
NOT TO SCALE



DETAIL N: TAPER RUN-OFF
NOT TO SCALE

RELEASED
08/11/06

DESIGN		DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D206-667-243	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE ASSY (206L HIGH AFT)	NTS
DATE	08.11.06	COPYRIGHT © 2000 BY DART AEROSPACE LTD	
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